



Central Bank of Jordan

# Mobile Payment Service Operational Framework

JoMoPay

Jordan Mobile payment

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## 1. Introduction

Massive developments in the world of telecommunications have marked in recent years a quantum leap that has had a direct effect on all social and economic aspects of life. The banking industry was not spared these developments as it has benefited from the rapid and great spread of electronic channels in many areas including, but not limited to, electronic fund transfer between different people and institutions regardless of their location or their different banks.

Recently, mobile phone services have been introduced into the banking sector starting from sending text messages to customers to inform them of any transactions carried out on their accounts to the mobile phone banking service where customers can carry out some of their banking operations (such as money transfer, paying bills, requesting an account statement or a cheque book, reporting the effects and results of a financial transaction, etc.) through their mobile phones and without having to go to their bank.

However, the most significant development in this field is the mobile phone payment services regardless of the location of the party receiving the money, where customers have become capable of carrying out the biggest part of their financial transactions such as money transfer, paying bills or shopping by means of mobile phones.

The radical change has emerged in the form of mobile payment services through setting aside or keeping small amounts of money and transferring them to others to meet financial requirements, known as electronic wallet.

Due to the role played by the banking Sector as the central pillar of modern economy; its role in supporting commercial activity, offering suitable payment means, offering financial intermediation channels between savers and investors, individuals and institutions; its role in mobilizing domestic and external savings and re-injecting them in investment and consumer projects in the various sectors of the economy; and due to the Central Bank of Jordan's belief in the need for effective participation by the different parties concerned in developing payment systems in accordance with international standards and best practices, the Central Bank of Jordan's initiative came to develop and build the National Mobile Payment Switch for the purposes of interchanging financial operations among service providers and for the purposes of clearing and settlement among members of the same service provider and among different service providers through settlement bank accounts to serve these purposes.

This document has been dedicated for presenting the mobile phone payment operational framework and putting the National Payment Switch – which has been termed as JoMoPay which means Jordan Mobile Payment – into operation in the Central Bank of Jordan.

## 2. Objectives

- A.** The Operational Framework aims to clarify the structure of processes, techniques, and operational environment of the mobile phone payment service, as well as dealing limits. It is also considered as a supplement and integral part of Mobile Payment Instructions issued for this purpose.
- B.** The Operational Framework contains the following:
  1. Operational rules and frameworks accompanying the process of service provision, including determining the technological environment and process of monitoring and control.

2. The minimum level of technical and service requirements for the different sides participating in the Mobile Payment System.
3. Responsibilities and duties governing the role of all participants in the Mobile Payment System, including regulating relations among service providers, and determining service providers' relations with their customers within the limits of what is prescribed in this framework.
4. General rules of the mechanism of mobile payment from beginning to end.

### 3. Definitions

- A. The following terms and expressions, wherever they occur in this framework, have the meanings assigned to them below unless the context indicates otherwise:
1. **Real Time Gross Settlement System (RTGS):** a central electronic multi-currency irrevocable payment system that processes the transfer and settlement of funds among member banks in real time through their accounts with the Central Bank.
  2. **Settlement:** the process of computing service providers' net rights and obligations resulting from clearing transactions achieved through mobile phone for a business day and sending them to the real time gross settlement system (RTGS-JO) or any other clearing and settlement system introduced in the Central Bank of Jordan to be credited to/debited from the accounts of banks concerned with the settlement in the Central Bank of Jordan.
  3. **Settlement Cycle:** the business day on which the mobile payment occurred (the value to same business day settlement).
  4. **Business Day:** official working times announced by the Central Bank of Jordan during which settlement of bank account financial transactions is carried out.
  5. **Clearing:** the process of exchanging mobile payments among service providers during the clearing session.
  6. **Clearing Session:** the period determined and managed by the Central Bank for exchanging mobile payments among service providers on official business days and holidays.
  7. **Dealing limits:** the maximum amounts that can be handled through the mobile phone and set within the current framework.
  8. **Debit Cap:** the upper debtor limit that may be handled by the settlement bank as a result of clearing processes during the business day and for each currency for the purposes of the mobile payment service.
  9. **Cash Cap:** the upper limit of electronic Money units that a service provider is allowed to issue to Unbanked customers in return for receiving cash from each currency.
- B. Terms and expressions stated in this framework have the same meanings assigned to them in the Mobile Payment Instructions.

### 4. Methods of Subscription to the Service

- A. Through a bank account, where the bank account is linked to a mobile phone number. The method requires the following:

1. Each service provider shall be responsible for their own customers, and the bank's responsibility shall be limited to monitoring the credits to and debits from the account of the bank's customer.
2. There must be a guarantee that the effect of the Mobile Payment System on bank accounts be within secure means to maintain security and confidentiality of customer account data in accordance with the standards stated in this framework.
3. The account holder shall authorize the bank to record transactions originating from or destined to the bank account in accordance with the criteria in force in that bank.

**B. Through an electronic wallet that is linked to a mobile phone number. This method requires the following:**

1. Payment shall be made through electronic money which is transferred by the service provider to customers' electronic wallets in return for cash receipts. Then, dealing with such electronic money is carried out by customers.
2. There must be a confirmation that all mobile payment electronic wallet accounts cannot be directly affected through other systems.
3. There must be a confirmation that all accounts and transactions are stored in an encrypted manner using a special secure encryption within the mobile payment system of the service provider.
4. The service provider shall deposit the value of issued electronic money in the mobile phone account at the settlement bank to allow the issuance of new electronic money because the service provider's electronic money obligations issued through it will not exceed the total of mobile phone account balance at the settlement bank and the guarantee account.
5. In no way shall electronic wallet accounts be overdrawn.
6. Electronic units in electronic wallets are not subject to interest and are not accepted as a guarantee for credit.

**5. Concerned Parties**

- A. The Central Bank as a regulatory authority and operator of the National Switch
- B. Service Providers
- C. Service Provider Agents
- D. Settlement Banks
- E. Mobile Phone Network Operators

**6. Concerned Parties' Roles and Responsibilities**

**A. Central Bank of Jordan**

1. Issuing regulatory legislation to ensure the provision of the mobile payment service.
2. Issuance of approvals necessary for service providers to provide the service.
3. Monitoring and supervision of service provider operations related to the mobile payment service.

4. Setting the minimum mobile phone account balance for each service provider and in accordance with the Central Bank's discretion.
5. Operating and managing the National Switch in accordance with the prescribed regulations in this regard.

#### **B. Service Providers' Role and Responsibility**

Mobile payment service providers shall be committed as a minimum to take the following actions:

1. Establishing suitable procedures for managing risks that might arise from the provision of the service, and these procedures must cover at least the following risks:
  - 1.1. Compliance risks, including as a minimum:
    - 1.1.1. Taking necessary actions for compliance of the service with all laws and regulations issued by the Central Bank.
    - 1.1.2. Ensuring compliance procedures through determining risk management policy and compliance procedures associated with the requirements of anti-money laundering and counter-terrorism financing. The service provider must also comply with service provision controls specified by the Central Bank, as well as any other controls determined by relevant government bodies.
  - 1.2. Operation risks, including as a minimum:
    - 1.2.1. Creating backup infrastructure to support the main data site for recovery from disasters and risks.
    - 1.2.2. Provision of Business Continuity Plans and a Disaster Recovery Site to ensure the continuity and sustainability of service provision.
    - 1.2.3. Ensuring that systems used in mobile payment are available at all times and round the clock and that all parties participating in the provision of the service are following the same rules.
    - 1.2.4. Conducting a periodic test to ensure the adequacy of the backup infrastructure, disaster recovery sites, risk management plans and business continuity plans.
  - 1.3. Settlement risks, including as a minimum:
    - 1.3.1. The provision of settlement information automatically among banks participating in the provision of the service through the service provider.
    - 1.3.2. The provision of sufficient fund in the mobile phone account at the settlement bank to execute the debtor settlement result.
2. Ensuring the availability of standards that ensure conducting audit, follow-up and recordkeeping that are necessary for documenting all mobile payment transactions in accordance with the applicable Electronic Transactions Act.
3. Ensuring that the working applications proposed (software) regarding mobile payment are compatible with international standards of financial transactions

(ISO 8583), with what is prescribed in this framework and in accordance with the technical document for the interfacing with the National Switch System.

4. Cooperating with contractors to provide the mechanisms necessary for educating customers on how to use mobile payment services.
5. Commitment to provide the Central Bank with internal and external audit reports and reports of neutral expertise houses related to Mobile payment services and any other reports as thought appropriate by the Central bank. The Central Bank of Jordan also shall have the right to conduct specialized audits with a determined scope and at the expense of the service provider.
6. Abiding by the dealing limits which the customer may handle.
7. Ensuring transparency in publishing and announcing all commissions incurred as a result of the provision of the service and any changes that might happen to them.
8. Providing and setting up payment solutions and applications to customers.
9. Ensuring that the mobile payment application used by the service providers contains all the tools required to monitor all the operations and support the generations of all required reports in accordance with instructions issued by the Central Bank.
10. Keeping a log file for all financial transactions according to the relevant laws and legislation.
11. Retention of audit trails for all operations carried out within the mobile payment system.
12. Issuing a quarterly report on evaluating the company's performance level.
13. Ensure that all customer operations can be tracked, verified, and validated.
14. Abiding by customer protection principles contained in Mobile Payment Instructions and in this framework.
15. Providing a network of branches and agents who will take part in service provision to customers as cooperation with agents must be governed by clear terms and procedures regarding agent selection and technical standards that have to be enjoyed by the agents as an agent of the service provider.
16. In case mobile phone account balance is below the minimum limit prescribed by the Central Bank, the service provider shall cover the overdrawn balance within a maximum of two business days.

### **C. The Service Provider's Agents**

1. Service providers have the right to assign any of the following operations to a network of agents for the purpose of carrying out operations specified in this document. The operations that may be assigned include:
  - 1.1. Receiving of subscription applications of unbanked customers to benefit from the service.
  - 1.2. Transferring electronic money units to customer electronic wallets according to the set limits.
  - 1.3. Liquidation of customer wallets according to the set limits.

2. If the service provider appoints agents to carry out mobile payment services, the service provider must make sure of the proof of the legal personality by means of obtaining the registration certificates, the memorandum of association, articles of incorporation, certificate of authorized signatories, authorization of the board of directors to approve the company's provision of the service, address of the head office and a list of branches along with their addresses.
3. The service provider must be capable of monitoring and tracking all operations performed by the agent.
4. The service provider shall provide the agent with application instructions showing the operations to be conducted by the agent.
5. The service provider shall seek to develop special controls to monitor activities to be performed by the agent with regard to this service.
6. The service provider shall offer appropriate insurance cover for the agent's activities related to the service.
7. The service provider must provide the agent with the systems in a way that is appropriate to the operations which the agent is authorized to provide.
8. The service provider shall regulate the relation with their agents through written agreements that indicate the roles and responsibilities of each party so as to include, as a minimum, enabling the service provider to exercise appropriate control over the agent's activities related to the service.
9. The agent may deal with more than one service provider through a special mobile phone number for each service provider.
10. The service provider shall provide the Central Bank with information on their agents in accordance with the form dedicated for this purpose by the Central Bank.

#### **D. Settlement Bank's Responsibility**

1. Arrange agreements with the service provider for the purposes of guarantee deposit account management.
2. Covering the result of the clearing net that concerns the service provider at the Central Bank.
3. Management of the service provider's guarantee deposit account to cover electronic money in customers' electronic wallets of the service provider, and informing the Central Bank of the value of the guarantee.
4. If the value of the mobile phone account balance is below the minimum limit prescribed by the Central Bank for more than two business days, the settlement bank shall transfer the difference from the guarantee account to cover the amount of decline and inform the Central Bank (System Operator) of the new value of the guarantee on time.
5. Ensuring the Central Bank's approval for increasing or decreasing the amount of the guarantee deposit.
6. Ensuring the Central Bank's approval for withdrawal from the mobile phone account.

7. Managing the mobile phone account at the bank to deposit the electronic wallet credits of the service provider's customers.
8. Crediting/Debiting the result of the service provider's clearing net to/from the mobile phone account.
9. Providing the National Switch Operator daily with the total of cash deposits made to the service provider's mobile phone account.
10. Monitoring the service provider's activities to the extent that guarantees its compliance with their contractual terms.

**E. Mobile Phone Network Operators' Role and Responsibilities**

1. Provision of infrastructure to build telecommunication networks for service providers.
2. Provision of the security and confidentiality levels set forth in this document as a minimum and in accordance with international standards.
3. Provision of their services to all service providers transparently and without exercising any form of discrimination among service providers. Making it possible for customers to choose any available and operating mobile payment service providers in accordance with their own choice and without restrictions or discrimination among them.

## 7. Dealing Limits

The Central Bank of Jordan shall determine the upper limits for handling mobile payment transactions in accordance with the following:

### A. Single transaction limit based on the type of transaction

No	Transaction Type	Transaction	Execution Responsibility
1	Person to Person transfer		National Switch Service provider
	Banked client	200	
	Unbanked client	100	
2	Person to public utility companies (water, electricity, telecommunications) Transfer Paying service bills Paying monthly subscriptions	500	National Switch Service provider
3	Public utility companies to a person Transfer		National Switch Service provider
	Banked client	300	
	Unbanked client	300	
4	Transfer from one person to a government entity (unless the government entity decides otherwise) Paying taxes Fees, offences and property tax	700	National Switch Service provider
5	Government entity to a person (unless the government entity decides otherwise) Transfer		National Switch Service provider
	Banked client	700	
	Unbanked client	700	
6	Transfer from one person to businesses and dealers		National Switch Service provider
	Bank client	500	
	Unbanked client	300	
7	businesses and dealers to persons transfer		National Switch Service provider
	Banked client	300	
	Unbanked client	200	
8	businesses and dealers to other businesses and dealers transfer	500	National Switch Service provider
9	Wallet account cash in		National Switch Service provider
	Unbanked client	300	
10	Cash withdrawal by an Unbanked customer through an ATM using mobile phones with a maximum limit of four transactions	100	National Switch Service provider

### B. Monthly limit for mobile payment transactions according to client type:

No	Client Type	Monthly Limit	Execution Responsibility
1	Banked client (a natural person)	2000	Service provider
2	Unbanked client	2000	Service provider
3	Banked client (a dealer or public utility company)	5000	Service provider
4	A government entity bank client (unless government entity decides otherwise)	No limit	Service provider

### C. Monthly limits for electronic wallet account

No	Client Type	Monthly Limit	Execution Responsibility
1	Unbanked client (a dealer or public utility company)	5000	Service provider
2	Unbanked client (a natural person)	1000	Service provider

## 8. Registration of Clients in the Service

The service provider is responsible for registering clients to benefit from the service through its branches or agents. The customer registration mechanism shall take into account the following:

- A. The service provider must have a customer registration system in place.
- B. Bank clients wishing to benefit from this service shall register with their banks and determine the account numbers linked to the service.
- C. Unbanked clients wishing to benefit from this service shall register with the service provider or one of its agents, through completing a form for opening an electronic wallet and providing the service provider with a copy of the required supporting documents.
- D. Obtaining customer identification documents must be taken into account whether the customer is a natural person or a legal personality, as well as procedures for the verification of customer identity and any other procedures in accordance with instructions concerned with anti-money laundering and counter-terrorism financing issued by the Central Bank for this purpose.
- E. Upon formal registration of the client and activation of the service, the service provider will issue a user code and personal identification number (PIN) (for each client).
- F. The service provider shall keep records and documentation of whatever transactions it carries out to contain all data related to due diligence on customers for a period of at least five years from the date of completion of the transaction, or the date of the termination of the working relation with the client, as appropriate, and update these data periodically.
- G. Upon authorization and activation of the subscription by the service provider, it becomes possible for registered clients to deposit amounts in their accounts, make payments and receive amounts of money into their accounts.

## 9. Customer Registration Processes

Customer registration procedures shall be conducted according to the following:

### A. Banked Client Registration

1. Completing a mobile payment service subscription application by the customer, and verification of the customer's account by the bank and its compatibility with service subscription instructions.
2. Customer data will be sent automatically by the bank to the service provider.
3. Data will be sent automatically by the service provider to the National Switch to verify the presence of a record for the customer.

4. The result of the registration process will be sent to the service provider by the National Switch.
5. The result of the registration process will be sent to the bank and client by the service provider.
6. If the registration process is successful, the service provider shall perform the following:
  - a) Issuing and sending a special user code and PIN number to the client.
  - b) Automatic activation of the service for the client and informing the client through the same mobile phone number linked to the service.
7. If the registration process is not successful, the service provider will inform the bank and client of the refusal of subscription.

## Bank Client Registration

### Beginning

- The client submits a registration application at the bank where his/her account is
- Completing a mobile payment service subscription application, and verification of the customer's account and its compatibility with service subscription instructions → ①
- ① The client's account is compatible with the special instructions
- Yes → The client's data will be sent automatically to the service provider collaborating with the bank
- Data will be sent automatically by the service provider to the National Switch to verify the presence of a record for the customer
- The result of the registration process will be sent to the service provider by the National Switch → ②
- No → Informing the client of subscription refusal → End
  
- ② → Has the registration process been successful? → Yes
- The service provider will issue the client with a special user code and PIN number if the process is successful
- Automatic activation of the service for the client and informing him/her through the same mobile phone number linked to the service → End
- No → The bank informs the client of subscription refusal

## **B. Unbanked Client Registration**

1. The client will visit any of the service provider's branches or agents and complete a mobile payment subscription application in accordance with Anti-Money Laundering and Counter-Terrorism Financing Instructions.
2. The client's data will be automatically sent by the service provider to the National Switch to verify the presence of a record for the client.
3. The result of the registration process will be sent to the service provider by the National Switch.
4. The result of the registration process will be sent to the client by the service provider.
5. If the registration process is successful, the service provider shall perform the following:
  - a) Issuing and sending a special user code and PIN number to the client.
  - b) Automatic activation of the service for the client and informing him/her through the same mobile phone number linked to the service.

## Unbanked Client Registration

Beginning → The client will visit any of the service provider's branches or agents

→ Completion of an electronic wallet subscription application, and at the same time, the client will provide the service provider with the information necessary for the registration process in accordance with Anti-Money Laundering and Counter-Terrorism Financing Instructions → ①

① → Information will be sent automatically by the service provider to the National Switch to verify the presence of a record for the client

→ The National Switch will send the response to the service provider

→ Has the registration process been successful? → Yes → ②

→ No → The service provider informs the client of registration refusal → End

② → The client will be informed of the success of the registration process

→ The service provide will issue the client with a special user code and PIN number

→ Automatic activation of the service for the client and informing him/her through the same mobile phone number linked to the service → End

## 10. Payment, Cash-In and Cash Withdrawal Transactions

### A. Payment by a Bank Client to Another Bank Client

1. The client initiates a mobile payment transaction through filling in the required fields and sending the financial transaction to the sending service provider.
2. The sending service provider will verify the specified limits and send the transaction to the bank of the paying customer to verify the customer's account and balance availability and debit the value of the financial transaction from the customer's account.
3. The paying customer's bank will send the response to the sending service provider.
4. The sending service provider will send the message to the National Switch if the **transaction of debiting the account** is successful.
5. The National Switch will verify the following:
  - a) The two clients, the payer and beneficiary, are registered and their national records at the Switch are active.
  - b) The financial transaction is within the specified conditions and limits.
6. The National Switch will send the transaction to the receiving service provider (if both sender and beneficiary are registered at a single service provider, the transaction will be sent back to the same service provider).
7. The receiving service provider will send the financial transaction to the beneficiary's bank to verify the beneficiary's account and credit the value of the transaction to him/her.
8. The beneficiary's bank will send the response to the receiving service provider informing them of the action taken, be it acceptance or rejection.
9. The National Switch will receive the result of the transaction from the receiving service provider.
10. The National Switch will send the result of the transaction to the sending service provider.
11. The paying customer will be informed of the success of the transaction by the sending service provider.
12. The beneficiary customer will be informed of the success of the transaction by the receiving service provider.
13. The result of the clearing net for all participants will be calculated and sent to the Real Time Gross Settlement System (RTGS-JO) at the end of the clearing session.

### Payment by a Bank Client to another Bank Client

Beginning → The client initiates a mobile payment transaction through filling in the required fields to send the financial transaction to the sending service provider → ①

① → The sending service provider will verify the specified limits and send the transaction to the bank of the paying customer to verify the customer's account and balance availability and debit the value of the financial transaction from the customer's account

→ The sender's bank → The paying customer will send the response to the sending service provider → Is the payment transaction accepted by the bank? → Yes → ②

→ No → The sending service provider will inform the customer of the failure of the transaction → End

② → The sending service provider will send the message to the National Switch to verify that both clients, payer and beneficiary, and the financial transaction are within the terms and conditions of mobile payments → Is the payment transaction accepted by the Switch? → Yes → The Switch will send the message to the receiving service provider → ③

No → The Switch will inform the sending service provider of the failure of the transaction → The sender's bank → The sending service provider will inform the client and bank of the failure of the transaction → End

③ → The receiving service provider will send the financial transaction to the beneficiary client's bank for verification and crediting the financial transaction to his/her account → The beneficiary's bank → The beneficiary's bank will send the response to the receiving service provider to inform them of the action taken, whether acceptance or rejection → ④

④ → The National Switch will receive the result of the transaction from the receiving service provider → The National Switch will send the result of the transaction to the sending service provider → The payer will be informed of the result of the transaction by the sending service provider → If the process is successful → The beneficiary will be informed of the success of the transaction by the service provider with whom the beneficiary is registered → ⑤

If the transaction fails → the sending service provider will inform the payer's bank of the failure of the transaction → End

⑤ → The net of the clearing position for all participants will be calculated and sent to the RTGS-JO at the end of the business day's session → End

**B. Payment by a Bank Client to an Unbanked Client**

1. The client will initiate a mobile payment transaction by means of filling in the required fields and sending the financial transaction to the sending service provider.
2. The sending service provider will verify the specified limits and send the transaction to the bank of the paying customer to verify the customer's account and balance availability and debit the value of the financial transaction from the customer's account.
3. The paying customer's bank will send the financial transaction to the sending service provider.
4. The sending service provider will send the response to the National Switch if the registration process is successful.
5. The National Switch will verify the following:
  - a) The two clients, the payer and beneficiary, are registered and their national records at the Switch are active.
  - b) The financial transaction is within the specified conditions and limits.
6. If the Switch refuses the transaction, the Switch will inform the sending service provider of the failure of the transaction, stating the reason.
7. The sending service provider will inform the client and bank of the failure of the transaction, stating the reason in order to reverse the transaction.
8. If the Switch approves the transaction, the National Switch will send the transaction to the receiving service provider (if both paying customer and beneficiary are registered at a single service provider, the transaction will be sent back to the same service provider).
9. The receiving service provider will verify the ability to credit the financial transaction to the beneficiary's wallet account.
10. The receiving service provider will send the response to the National Switch to inform them of the action taken, be it rejection or approval, along with a statement of the reason for rejection.
11. The National Switch will send the result of the transaction to the sending service provider.
12. If the transaction is rejected, the sending service provider will inform the bank and customer of the refusal of the transaction along with a statement of the reason.
13. The paying customer will be informed of the success of the transaction by the sending service provider.
14. The beneficiary customer will be informed of the success of the transaction by the receiving service provider.
15. The result of the clearing net for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session.

## Payment by a Bank Client to an Unbanked Client

Beginning → The client will initiate a mobile payment transaction by means of filling in the required fields to send the financial transaction to the sending service provider → ①

① → The sending service provider will verify the set limits and send the transaction to the bank of the paying customer to verify the customer's account and balance availability and debit the value of the financial transaction from the customer's account → The sender's bank → The paying customer's bank will send the financial transaction to the sending service provider → Is the payment transaction approved by the bank? → Yes → ②

→ No → The sending service provider will inform the customer of the failure of the transaction → End

② → The sending service provider will send the message to the National Switch to verify that the two customers, the payer and beneficiary, and financial transaction are within the mobile payment controls and conditions → Is the payment transaction accepted by the Switch? → Yes → The Switch will send the message to the receiving service provider → ③

No → The Switch will inform the sending service provider of the failure of the transaction → The sender's bank → The sending service provider will inform the customer and bank of the failure of the transaction, stating the reason in order to reverse the financial transaction record → End

③ → The receiving service provider will verify the viability of crediting the financial transaction to the beneficiary's wallet account → The National Switch will receive the result of the transaction, be it approval or rejection, from the receiving service provider along with a statement of the reason for rejection → The National Switch will send the result of the transaction to the sending service provider → The payer will be informed of the result of the transaction by the sending service provider → In case of success of the transaction → The beneficiary will be informed of the result of the transaction by the service provider with whom the beneficiary is registered → ④

In case of failure of the transaction → The sending service provider will inform the paying bank and customer of the failure of the process → End

④ → The net of the clearing position for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session → End

### **C. Payment by an Unbanked Client to a Bank Client**

1. The customer will initiate a mobile payment transaction by means of filling in the required fields and sending the financial transaction to the sending service provider.
2. Upon verification of the customer's wallet account, availability of balance and set limits, and then, debiting the value of the payment transaction from the customer's wallet account, the sending service provider will send the financial transaction to the National Switch.
3. The National Switch will verify the following:
  - a) The two customers, payer and beneficiary, are registered and their national records at the Switch are active.
  - b) The financial transaction is within the set conditions and limits.
4. In case of refusal of the transaction by the Switch, the Switch will inform the sending service provider of its rejection along with a statement of the reason for rejection in order to reverse the record of the transaction.
5. The sending service provider will inform the customer of the rejection of the transaction, stating the reason.
6. If the Switch approves of the transaction, the National Switch will send the transaction to the receiving service provider (in case the paying and beneficiary clients are registered at a single service provider, the transaction will be sent back to the same service provider).
7. The receiving service provider will send the financial transaction to the beneficiary's bank to verify the customer's account and credit the value of the transaction to his/her account.
8. The beneficiary's bank will send the response to the receiving service provider to inform them of the action taken, be it approval or refusal.
9. The National Switch will receive the result of the transaction from the receiving service provider.
10. The National Switch will send the result of the transaction to the sending service provider.
11. In case of a response of refusal, the sending service provider will reverse the transaction record.
12. The paying customer will be informed of the result of the transaction by the sending service provider.
13. The beneficiary customer will be informed of the success of the transaction by the receiving service provider.
14. The result of the clearing net for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session.

## Payment by an Unbanked Client to a Bank Client

Beginning → The customer will initiate a mobile payment transaction by means of filling in the required fields to send the financial transaction to the sending service provider → ①

① → The sending service provider will verify the customer's data and availability of balance and debit the value of the financial transaction from the customer's wallet account → Is the payment transaction approved? → Yes → ②

No → The sending service provider will inform the customer of the failure of the transaction → End

② → The sending service provider will send the message to the National Switch to verify that the two clients, the payer and beneficiary, and financial transaction are within the mobile payment terms and conditions → Is the payment transaction approved by the Switch? → Yes → The Switch will send the message to the receiving service provider → ③

No → The Switch will inform the sending service provider of the failure of the transaction → The sending service provider will inform the customer of the failure of the transaction stating the reason in order to reverse the transaction record → End

③ → The receiving service provider will send the financial transaction to the beneficiary customer's bank for verification and crediting the value of the transaction to his/her account → The beneficiary's bank → The beneficiary's bank will send the response to the receiving service provider to inform them of the action taken, be it approval or rejection, along with a statement of the reason for refusal so that the transaction record is reversed → ④

④ → The National Switch will receive the result of the transaction from the receiving service provider → The National Switch will send the result of the transaction to the sending service provider → The payer will be informed of the result of the transaction by the sending service provider → In case of success of the transaction → The beneficiary will be informed of the success of the transaction by the service provider with whom the beneficiary is registered → ⑤

→ In case of failure of the transaction → End

⑤ → The net of the clearing position for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session → End

#### **D. Payment by an Unbanked Client to Another Unbanked Client**

1. The customer will initiate a mobile payment transaction by means of filling in the required fields and sending the financial transaction to the sending service provider.
2. Upon verification of the customer's wallet account, availability of balance and set limits, and debiting the value of the payment transaction from the customer's wallet account, the sending service provider will send the financial transaction to the National Switch.
3. The National Switch will verify the following:
  - a) The two customers, the payer and beneficiary, are registered and their national records at the Switch are active.
  - b) The financial transaction is compatible with the set conditions and limits.
4. In case of refusal of the transaction by the Switch, the Switch will inform the sending service provider of its rejection of the transaction and state the reason for rejection so that the transaction record is reversed.
5. The sending service provider will inform the customer of the rejection of the transaction, stating the reason.
6. If the Switch approves of the transaction, the National Switch will send the transaction to the receiving service provider (in case the paying and beneficiary customers are registered at a single service provider, the transaction will be sent back to the same service provider).
7. The receiving service provider will verify the viability of crediting the financial transaction to the beneficiary's wallet account.
8. The receiving service provider will send the response to the National Switch to inform them of the action taken, be it approval or refusal, along with a statement of the refusal.
9. The National Switch will send the result of the transaction to the sending service provider.
10. The paying customer will be informed of the result of the transaction by the sending service provider.
11. The beneficiary customer will be informed of the success of the transaction by the receiving service provider.
12. The result of the clearing net for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session.

## Payment by an Unbanked Client to another Unbanked Client

Beginning → The customer will initiate a mobile payment transaction by means of filling in the required fields and to send the financial transaction to the sending service provider → ①

① → The sending service provider will verify the customer's data and availability of balance, and debit the value of the financial transaction from the customer's wallet account → Is the payment transaction approved? → Yes → ②

No → The sending service provider will inform the customer of the failure of the transaction → End

② → The sending service provider will send the message to the National Switch to verify that the two customers, the payer and beneficiary, and financial transaction are within the mobile payment terms and conditions → Is the payment transaction approved by the Switch? → Yes → The Switch will send the message to the receiving service provider → ③

No → The National Switch will inform the sending service provider of the failure of the transaction → The sending service provider will inform the customer of the failure of the transaction along with a statement of the reason so that the transaction record is reversed → End

③ → The receiving service provider will verify the viability of crediting the financial transaction to the beneficiary's wallet account → The National Switch will receive the result of the transaction, be it approval or rejection, from the receiving service provider → The National Switch will send the result of the transaction to the sending service provider → The payer will be informed of the result of the transaction through the sending service provider → In case of success of the transaction → The beneficiary will be informed of the success of the transaction by the service provider with whom the beneficiary is registered → ④

In case of failure of the transaction → End

④ → The net of the clearing position for all participants will be calculated and sent to the RTGS-JO at the end of the clearing session → End

### **E. Electronic Wallet Cash In (Unbanked Client)**

1. The customer will visit any of his/her service provider's branches or agents.
2. The service provider/agent will automatically send the data of the cash-in transaction to the service provider to verify the customer's wallet account and compatibility of the transaction with the relevant conditions and limits.
3. In case of rejection of the cash-in transaction by the service provider, the service provider will inform the branch's clerk or agents of the refusal of the transaction. The clerk or agent will then inform the customer of the rejection of the transaction.
4. In case of approval of the transaction by the service provider, the service provider will send the transaction to the National Switch.
5. The National Switch will verify the following:
  - a) The customer is registered and his/her national record at the Switch is active.
  - b) The financial transaction is compatible with the set conditions and limits.
  - c) The service provider's ability to issue electronic money.
6. The National Switch will send the result of the transaction to the service provider.
7. In case of refusal of the transaction by the Switch, the service provider will inform the branch's clerk /agents of the refusal of the transaction along with a statement of the reason. The branch's clerk /agents will then inform the customer of the rejection of the transaction, stating the reason.
8. In case of approval of the cash-in transaction by the Switch, the service provider will credit the value of the cash-in to the customer's wallet and inform the customer of the success of the transaction/ inform the branch's clerk /agents of the success of the transaction.

### Electronic Wallet Cash In (Unbanked Client)

Beginning → The customer visits one of his/her service provider's branches/agents → The branch's clerk will send the data of the deposit transaction to the service provider → The service provider will verify the validity of the customer's wallet account and compatibility of the transaction with the relevant terms and limits → ①

① → Is the transaction acceptable to the service provider? → Yes → The service provider will send the transaction to the National Switch to verify its validity and that it is within the terms and conditions of the use of mobile phones → The National Switch will send the response to the service provider → ②

No → The service provider will inform the branch's clerk of the refusal of the transaction along with a statement of the reason → The clerk will inform the customer of the rejection of the transaction and state the reason. → End

② → Has the transaction been successful? → Yes → The service provider will deposit the amount in the customer's wallet → The service provider will inform the customer and branch's clerk of the success of the transaction through the phones registered with the service provider → End

No → The service provider will inform the branch's clerk of the refusal of the transaction and state the reason → The clerk will inform the customer of the refusal of the transaction and why it has been refused → End

## **F. Cash Withdrawal from the Electronic Wallet**

1. The customer will visit one of his/her service provider's branches/agents.
2. The customer will send a cash withdrawal transaction to the service provider for verification of the customer's wallet account and compatibility of the transaction with the relevant terms and limits.
3. In case of approval of the verification process, the service provider will send the transaction to the National Switch.
4. The National Switch will verify the following:
  - a) The customer is registered, and his/her national record is active.
  - b) The financial transaction is compatible with the set conditions and limits.
5. The National Switch will send the result of the transaction to the service provider.
6. In case of refusal of the transaction by the Switch, the service provider will inform the branches clerk /agent / customer of the rejection of the transaction.
7. In case of success of the transaction, the service provider will inform the branches clerk /agent / customer of the success of the transaction.
8. The branch's clerk /agent's will pay the value of the cash withdrawal to the customer.

### Cash Withdrawal from the Electronic Wallet – Unbanked Client

Beginning → The customer will visit one of his/her service provider's branches/agents → The customer will send a cash withdrawal transaction to the service provider → The service provider will verify the customer's wallet validity and compatibility of the transaction with the relevant terms and limits → ①

① → Is the transaction acceptable to the service provider? → Yes → The service provider will send the transaction to the National Switch for verification of its validity and that it is compatible with the terms and conditions of the use of mobile phones → The National Switch will send the response to the service provider → ②

No → The service provider will inform the customer of the rejection of the transaction → End

② → Is the transaction acceptable to the Switch? → Yes → The service provider will withdraw the amount from the customer's wallet → The service provider will inform the customer and branch's clerk of the success of the transaction through the phones registered with the service provider → ③

No → The service provider will inform the customer and branch's clerk of the failure of the transaction along with a statement of the reason → End

③ → The branch's clerk will pay the value of the cash withdrawal to the customer → End

### **G. Cash Withdrawal from the Settlement Bank's ATM – Unbanked Client**

1. The customer will send a cash withdrawal transaction – ATM – to the service provider for verification of the customer's wallet and compatibility of the transaction with the relevant terms and limits.
2. If the transaction is rejected by the service provider, the service provider will inform the customer of the refusal of the transaction.
3. If the verification process is approved, the service provider will send the customer a Transaction Reference Number (TRN) and PIN number especially for cash withdrawal from the ATM, valid for one time and for a limited period of time.
4. The customer will enter the TRN and PIN numbers in the specified fields on the ATM screen and then the ATM will send them to the service provider.
5. The service provider will send the cash withdrawal transaction to the National Switch for verification of the following:
  - a) The customer is registered and that his/her national record is active.
  - b) The financial transaction is compatible with the set terms and limits.
6. The National Switch will send the result of the transaction to the service provider.
7. In case of approval of the verification process by the National Switch, the service provider will subtract the amount from the customer's wallet.
8. The service provide will inform the ATM of the approval and success of the transaction on the phones registered at the service provider.
9. The ATM will perform the withdrawal transaction according to the specified value and debit it from the registered service provider's mobile phone account.
10. The customer will collect the money from the ATM.
11. In case of failure of the verification process by the National Switch, the service provider will inform the customer and ATM of the rejection of the transaction.

### Cash Withdrawal from the Settlement Bank's ATM – UnbankedClient

The customer will send a cash withdrawal transaction – ATM – to the service provider → The service provider → The service provider will verify the validity of the customer's wallet and compatibility of the transaction with the relevant terms and limits → Is the transaction acceptable to the service provider? → Yes → The service provider will send the customer TRN and PIN numbers especially for cash withdrawal from the ATM and valid for one time and for a limited period of time → ①

No → The service provider will inform the customer of the refusal of the transaction along with a statement of the reason → End

① → The customer will enter the TRN and PIN numbers in the specified fields on the ATM screen and press on the "Send" Button → The ATM will send the cash withdrawal transaction to the service provider → The service provider will send the transaction to the National Switch for verification of its validity and that it is compatible with the terms and conditions of using the mobile phone → The National Switch will send the response to the service provider → ②

② → Is the transaction acceptable to the Switch? → Yes → The service provider will withdraw the amount from the customer's wallet → The service provider will inform the ATM of the success of the transaction through the phones registered at the service provider → ③

No → The service provider will inform the customer and ATM of the refusal of the transaction along with a statement of the reason → End

③ → The ATM will perform the withdrawal transaction by the value of the cash withdrawal → The customer will collect the money from the ATM → End.

## 11. Settlements

- A. Settlement Round: all transactions performed are settled through the system on the same business day.
- B. For the purposes of settlement, the business day starts from 14:30 until 14:30 on the next business day.
- C. The result of the settlement which contains the Net Clearing Position will be transferred to the RTGS-JO or any other clearing and settlement system approved by the Central Bank of Jordan at least once on a business day.
- D. The system operator will provide each bank and service provider with their own settlement reports.
- E. If it was not possible to obtain the result on time or send it to the RTGS-JO, the result execution will be postponed to the morning of the next business day.
- F. The system administrator may divide the result of the settlement by taking out more than one result at times determined as it deems it appropriate during the business day.
- G. Settlement transactions performed vary according to the way mobile payments are completed and include:
  - 1. Payment transactions within a single service provider.
  - 2. Payment transactions between different service providers.

**Note that in both cases the settlement might be against the benefit of one or more parties based on the nature of the payment transactions completed.**

### H. Settlement Requirements:

- 1. Service providers shall make sure that their systems are compatible with and conform to settlement requirements and standards in this mobile payment regulatory framework.
- 2. System operators shall provide solution providers with settlement positions for the purposes of settlement with the related systems.
- 3. All final settlement operations must be achieved through the final settlement system in force at the Central Bank of Jordan and in accordance with the settlement system requirements.
- 4. The service provider shall maintain final settlement detailed information as reference material for no less than five years.

### I. Settlements Within a Single Service Provider:

- 1. Transactions performed within the framework of the service provider between accounts opened at the service provider for its Unbanked clients and completed within the boundaries of its infrastructure, and transactions taking place between customer accounts of a service provider's contracting or participating bank do not undergo settlement because they take the form of internal transactions (on-us).
- 2. Transactions performed between accounts opened at the service provider, between customer accounts of the service provider's participating bank and between the accounts of different bank customers are cleared and settled among

the participating banks, including the settlement bank, through the RTGS-JO, because they take the form of external transactions (not- on-us).

#### **J. Settlements Among Different Service Providers**

Transactions taking place between accounts opened at different service providers and customer accounts of service providers' participating banks are cleared and settled among participating banks, including the settlement bank, through the RTGS-JO at the Central Bank of Jordan because they take the form of external transactions (not-on-us).

#### **K. Final Settlement**

In order to achieve the final settlement between service providers and banks, the National Switch operator must provide the RTGS-JO at the Central Bank of Jordan with clearing final results, whether within the same service provider or between different service providers, and the final settlement shall take place through the RTGS-JO by means of affecting the accounts of service providers' member and settlement banks.

## **12. Commissions**

- A.** The National Switch operator may charge commissions on transactions routed through the National Switch to be paid by service providers and to be debited from the settlement bank's account.
- B.** Service providers may subtract commissions in accordance with the following:
  - 1. The sending service provider: the commission is added to the value transferred.
  - 2. The receiving service provider: the commission is deducted from the value transferred.
- C.** Contracts with the customers shall explain the mechanism of deducting commissions on all transactions executed through the mobile phone.
- D.** Each service provider shall open a registered commission wallet account to credit commissions charged from Unbanked clients' electronic wallets. Transferring the value of this wallet to a bank account shall take place through a transaction sent to the National Switch.
- E.** Service providers shall be charged commissions for the benefit of the National Switch based on the total number of daily transactions and with a fixed commission rate to be determined by the Central Bank and charged to the settlement bank account at the Central Bank through a special commissions file that shall be transferred via the RTGS-JO or any other system that is deemed appropriate by the Central Bank.
- F.** The Central Bank shall determine which transactions are exempt from commissions.
- G.** The Central Bank shall determine the upper limit for service providers' commissions depending on the nature of transactions achieved through the system unless they were exempt from commissions.
- H.** In case of agreement between service providers on charging a certain party the commission and share it, the value charged to either of them according to the agreement shall be transferred, as any transaction carried out via the system, from a

service provider's commission wallet account to the other service provider's commission wallet account.

## 13. Clients' Rights and Responsibilities

### A. Clients' Rights

1. The service provider shall provide the general provisions for benefiting from the service so that these provisions are made available whether in the form of booklets or published on the service provider's website. The provisions must be written in plain and clear language and must contain, as a minimum, the following:
  - a) The services provided by the service provider
  - b) The responsibilities and duties of the service provider and customers.
  - c) Details of the commissions which the service provider will charge in return for each service.
  - d) The method of addressing customers' complaints and suggestions.
  - e) The procedures that must be followed by customers if the mobile phone is lost.
  - f) The procedures related to the stopping of benefiting from the service.
2. The relation between the service provider and customers must be built upon a formal contractual agreement stipulating the conditions for benefiting from the mobile payment service.
3. The service provider shall take necessary precautionary measures to ensure the security and confidentiality of customers' data.
4. The service provider shall have in place a Customer Service Centre. The duties of such a centre include, as a minimum, the following:
  - a) Provide advice and guidance to customers.
  - b) Answer customer enquiries.
  - c) Offer customers sufficient learning materials to promote the principles of ease of use, security, and confidentiality.
  - d) Receive customer complaints and suggestions.
5. The service provider shall have clear procedures and mechanisms for addressing customer complaints and suggestions.
6. As a minimum, the steps below shall be followed in order to address customer complaints and suggestions:
  - a) Announce the Complaint Centre's address, email, and special phone numbers.
  - b) Record the complaint/suggestion upon receiving it in a special file and give it a reference number, and it must be signed by the customer making the complaint or suggestion.
  - c) Initiate action regarding the complaint/suggestion on the first business day following the receiving of the complaint/suggestion.

- d) Address the complaint / Look into the suggestion within a maximum of three days and inform the customer of the result.
  - e) Record all phone calls made via the Complaint Centre's phone lines and maintaining such recordings until resolution of the dispute and closure of the complaint.
7. The service provider shall ensure a sufficient amount of the sense of duty and commitment on the part of contractors as service providers are accountable for the activities of their agents in the event of registering intentional or unintentional mistakes by the agents.
  8. Ease of use (lists, SMS, USSD, etc.)
  9. Privacy, trust, security and confidentiality of transactions.
  10. Convenience anywhere, any time.
  11. Instant access to funds balances upon completion of the payment transaction.
  12. Immediate transfer of the value of transactions and transaction value entitlements.
  13. Ease of instant access to conflict resolution operations.

#### **B. Clients' Responsibilities**

1. Ensure the protection of the PIN number.
2. Make sure of the details of the transaction in terms of the phone number of the receiver and value of the transaction before executing the transaction.
3. Comply with all the rules of security and confidentiality, as approved by the service provider.
4. Abstain from initiating transactions without the availability of sufficient funds in their accounts.

## **14. Technical and Security Requirements**

Information security is one of the key elements in the provision of the mobile payment service. Therefore, the technology used in the provision of the service shall be characterised by security, confidentiality, integration, and reliability. Overall, the technology used in the provision of the mobile payment service shall include the following standards as a minimum:

- a) Be compatible and operate smoothly with other systems.
- b) Use of Secured SMS in accordance with the latest international standards or the use of USSD.
- c) Use of secure and encrypted communication channels to provide mobile payment services.
- d) Ease and non-complexity of applications that will be set on customers' mobile phones.
- e) The user interface must be a menu based
- f) The customer's access to the menu must be controlled by the username and PIN number.

- g) The PIN that will be used must be encrypted.

In addition to the general standards mentioned above, service providers shall provide a special automated system that achieves the technical and security requirements determined by the Central Bank of Jordan in accordance with what is described in the Requirement Specifications for Interface with the National Mobile Payment Switch document attached with this framework.